

GenCore Version 5.1.6
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OM protein - protein search, using swi model

Run on: June 25, 2003, 14:40:41 ; Search time 12.6202 Seconds
(Without alignments)
837.928 Million cell updates/sec

Title: US-09-622-613b-24

Perfect score: 601
Sequence: 1 SNAATFOQKHIIINPTICNT.....ICVKCENQYPVHFGIGRCP 110

Scoring table: BLOSUM62
Gapop 10.0, Gapext 0.5

Searched: 283224 seqs, 96134422 residues

Total number of hits satisfying chosen parameters: 283224

Minimum DB seq length: 0

Maximum DB seq length: 1200000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database :
1: p1r:73:***
2: p1r:1:***
3: p1r:2:***
4: p1r:4:***

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	586.5	97.6	111	2 A27121	ribonuclease-relat
2	450	74.9	111	1 JX0120	ribonuclease-relat
3	369	51.4	111	2 JX0085	pancreatic ribonuc
4	272.5	45.3	104	2 A39035	ribonuclease-relat
5	135.5	22.5	124	1 NRWHR	pancreatic ribonuc
6	135.5	22.5	145	1 A35932	angiogenin precurs
7	133.5	22.2	167	2 S20066	pancreatic-type ri
8	132.5	22.0	124	1 NRPB	pancreatic ribonuc
9	126.5	21.0	119	2 S41111	pancreatic ribonuc
10	122.5	20.4	124	1 NRPRH	pancreatic ribonuc
11	122	20.3	122	1 NRKGR	pancreatic ribonuc
12	120.5	20.0	128	1 NRUC	pancreatic ribonuc
13	120.5	20.0	149	1 NRMS	pancreatic ribonuc
14	119.5	19.9	123	1 A43825	angiogenin - pig
15	118.5	19.7	128	1 NRGPB	pancreatic ribonuc
16	117.5	19.6	128	1 NRHO	pancreatic ribonuc
17	116.5	19.4	124	1 NRCH	pancreatic ribonuc
18	116.5	19.4	124	1 NRCHM	pancreatic ribonuc
19	116.5	19.4	124	1 NRCHM	pancreatic ribonuc
20	116.5	19.4	124	1 NRCHM	pancreatic ribonuc
21	114.5	19.1	124	2 S08549	pancreatic ribonuc
22	114	19.0	125	1 A32474	angiogenin - dom
23	113.5	18.9	124	1 NRDN	pancreatic ribonuc
24	113.5	18.9	125	1 B43825	angiogenin - rabbi
25	113	18.8	147	1 NRHUG	angiogenin precurs
26	112.5	18.7	124	1 NRGF	pancreatic ribonuc
27	112.5	18.7	124	1 NRDEO	pancreatic ribonuc
28	111.5	18.6	130	2 S22808	pancreatic ribonuc
29	110.5	18.4	124	1 NRBOB	pancreatic ribonuc

30	110.5	18.4	124	1 NRWB	pancreatic ribonuc
31	110.5	18.4	124	1 NREKN	pancreatic ribonuc
32	110.5	18.4	124	2 S07141	pancreatic ribonuc
33	110.5	18.4	124	2 JCS560	pancreatic ribonuc
34	110.5	18.4	150	1 NRBO	pancreatic ribonuc
35	110.5	18.4	158	2 I61900	pancreatic ribonuc
36	109.5	18.2	124	1 NRSH	pancreatic ribonuc
37	108.5	18.1	119	2 JX0115	pancreatic ribonuc
38	108.5	18.1	124	1 NRCH	pancreatic ribonuc
39	108.5	18.1	152	1 NRRT	pancreatic ribonuc
40	106.5	17.7	124	1 NRHP	pancreatic ribonuc
41	106.5	17.7	125	4 A47498	pancreatic ribonuc
42	106.5	17.7	150	1 NRBOB	pancreatic ribonuc
43	104.5	17.4	124	1 NRGN	pancreatic ribonuc
44	104.5	17.4	124	1 NRDEO	pancreatic ribonuc
45	104	17.3	125	2 S04503	pancreatic ribonuc

ALIGNMENTS

RESULT 1

A27121

ribonuclease-related stallo acid-binding lectin - bullfrog

C:Species: Rana catesbeiana (bullfrog)

C:Date: 19-Nov-1988 #sequence_revision 19-Nov-1988 #text_change 30-Jun-1993

C:Accession: A27121

R:Titani, K., Takio, K., Kuwada, M., Nitta, K., Sakakibara, F., Kawachi, H., Takayan

Biochemistry 26, 2189-2194, 1987

A:Title: Amino acid sequence of stallo acid-binding lectin from frog (Rana catesbeiana

A:Reference number: A27121; MUID:87299649; PMID:3304421

A:Accession: A27121

A:Molecule type: protein

A:Residues: 1-111 <TTT>

C:Superfamily: pancreatic ribonuclease

C:Keywords: lectin

Query Match 97.6% Score 586.5; DB 2; Length 111;

Best Local Similarity 99.1% Pred. No. 2.4e-51;

Matches 109; Conservative 0; Mismatches 0; Indels 1; Gaps 1;

QY 2 NMATFOQKHIIINPTI-CNTIMNNIYVGGCKRVNFTIISATYKATGVINNVL 60

Db 2 NMATFOQKHIIINPTIINCNITMDNNIYVGGCKRVNFTIISATYKATGVINNVL 61

QY 61 STTFQALNTCTRTSITPRCPYSSRTETNYICVACENQYPVHFGIGRCP 110

Db 62 STTFQALNTCTRTSITPRCPYSSRTETNYICVACENQYPVHFGIGRCP 111

RESULT 2

JX0120

ribonuclease-related stallo acid-binding lectin - Japanese frog

C:Species: Rana japonica (Japanese frog)

C:Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 10-Sep-1999

C:Accession: JX0120

R:Kimura, Y., Oyama, F., Oyama, R., Sakakibara, F., Nitta, K., Kawachi, H., Takayana

J. Biochem. 108, 139-143, 1990

A:Title: Amino acid sequence of a lectin from Japanese frog (Rana japonica) eggs.

A:Reference number: JX0120; MUID:91035319; PMID:2229005

A:Accession: JX0120

A:Molecule type: protein

A:Residues: 1-111 <KAM>

A:Experimental source: egg

C:Superfamily: pancreatic ribonuclease

C:Keywords: lectin; pyroglyutamic acid

F:1/Modified site: pyroglutamate carboxylic acid (Gln) #status experimental

F:19-72,34-82,52-97,94-111/Disulfide bonds: #status experimental

Query Match 74.9% Score 450; DB 1; Length 111;

Best Local Similarity 78.2% Pred. No. 8.8e-38;

Matches 86; Conservative 7; Mismatches 15; Indels 2; Gaps 2;

S20066
pancreatic-type ribonuclease (EC 3.1.27.5) BRB precursor, brain - bovine

C:Species: Bos primigenius taurus (cattle)
C.Date: 22-Nov-1993 #sequence_revision 12-May-1995 #text_change 22-Jun-1999

A:Accession: S20066; JX0056
R:Sasao, M.P.; Carzana, A.; Confalone, E.; Cosl, C.; Sorrentino, S.; Viola, M.; Palmieri,
R. Watanabe, H.; Katoh, H.; Ishii, M.; Komoda, Y.; Sando, A.; Takizawa, Y.; Ohgi, K.; Iri
J. Biochem. 104, 939-945, 1988

A>Title: Molecular cloning of the gene encoding the bovine brain ribonuclease and its ex
A.Reference number: S20066; MUID:92093604; PMID:1754384

A:Accession: S20066
A:Molecule type: DNA
A.Residues: 1-167 <SAS>
A:Cross-references: EMIL:X59767; NID:q150; PIDN:CAA42439.1; PID:gk151
R:Watanabe, H.; Katoh, H.; Ishii, M.; Komoda, Y.; Sando, A.; Takizawa, Y.; Ohgi, K.; Iri
J. Biochem. 104, 939-945, 1988

A>Title: Primary structure of a ribonuclease from bovine brain.
A.Reference number: JX0056; MUID:89214015; PMID:3243767

A:Accession: JX0056
A:Molecule type: protein
A.Residues: 27-154, 'S', 156-166 <MAT>
A.Experimental source: brain
C:Superfamily: pancreatic ribonuclease
C:Keywords: glycoprotein; hydrolase
F:38,67,145/Active site: His, Lys, His #status predicted
F:52-110,66-121,84-136,91-98/disulfide bonds:#status predicted
F:8-110,66-121,84-136,91-98/disulfide bonds:#status predicted
F:155/Binding site: carboxylate (Asn),(covalent)#status experimental
F:155/Binding site: carboxylate (Thr)(covalent)#status experimental
F:159/Binding site: carbohydrate (Ser)(covalent)#status experimental

Query Match 22.2% Score 133.5; DB 2; Length 167;
Best Local Similarity 31.4%; Pred. No. 3,7e-06;
Matches 38; Conservative 17; Mismatches 43; Indels 23; Gaps 7;

Oy 4 ATFOCKHI-----IMPIICNTMDNNIYVGGCKCVNFIFIISSATTKAICTGVINM 57
| : : : : | : : : : | : : : : | : : : : | : : : : |
Db 32 AKFRGHMHSGSSSSSNPNNCNMKRR-RMTGRCRVNFTVHSLDYKAVCS---QK 87
| : : : : | : : : : | : : : : | : : : : | : : : : |
Oy 58 NVL-----STRFQLNCTRTISITPRP-CPYSSRTETNYVCACE-NQY-PVHRA 104
| : : : : | : : : : | : : : : | : : : : | : : : : |
Db 88 NITCKNGHPHCYOYSKSTMSITDCRETSSSKYPNCAYKFSOKOKYITVACEGNPVPVPHD 147
| : : : : | : : : : | : : : : | : : : : | : : : : |
Oy 105 G 105
| : : : : | : : : : | : : : : | : : : : | : : : : |
Db 148 G 148

RESULT 8
NRPG
pancreatic ribonuclease (EC 3.1.27.5) - pig
N.Alternate names: RNase 1; RNase A
C.Species: Sus scrofa domestica (domestic pig)
C.Date: 24-Apr-1984 #sequence_revision 24-Apr-1984 #text_change 03-Jun-1994
A:Accession: A92071; A91391; A00816
R:Jackson, R.L.; Hirs, G.H.W.
J. Biol. Chem. 245, 637-653, 1970
A>Title: The primary structure of porcine pancreatic ribonuclease. II. The amino acid se
A.Reference number: A92071; MUID:70104197; PMID:5460946

A:Accession: A92071
A:Molecule type: protein
A.Residues: 1,'Q',3-124 <JAC>
R:Wierenga, R.K.; Huizinga, J.D.; Gaastera, W.; Welling, G.W.; Beintema, J.J.
FEBS Lett. 31, 181-185, 1973
A>Title: Affinity chromatography of porcine pancreatic ribonuclease and reinvestigation
A.Reference number: A91391
A:Accession: A91391
A:Molecule type: protein
A.Residues: 1-124 <ME>
R:Phelean, J.J.; Hirs, G.H.W.
J. Biol. Chem. 245, 654-661, 1970
A>Title: The primary structure of porcine pancreatic ribonuclease. III. The disulfide bo
A.Reference number: A92072; MUID:70104198; PMID:4904878
A:Contents: annotation; disulfide bonds
C:Superfamily: pancreatic ribonuclease

[illegible]

Db 6 AKFERQHTDNPSSVSSNYCNQMKSR-NLTGRCRKFVNTFVHSLADVOAVCS---QK 61
 QY 58 NVL-----STTRFQNTCTRTSTTPRP-CPYSSRTETNYICVCE-NOY-PVHF 103
 Db 62 NVAKNGQNTCYQSVSTMSITDCRETGSSKYPNCAKYTKQAKKHIIIVACEGPNYPVHF 120

RESULT 11

NRKCR
 pancreatic ribonuclease (EC 3.1.27.5) - red kangaroo
 N:Alternate names: RNase 1; RNase A
 C:Species: Macropus rufus, Megaleia rufa (red kangaroo)
 C:Date: 30-Nov-1980 #sequence_revision 30-Nov-1980 #text_change 04-Oct-1996
 C:Accession: A00833
 R:Gastra, W.; Welling, G.W.; Beintema, J.J.
 Eur. J. Biochem. 86, 209-217, 1978
 A:Title: The amino-acid sequence of kangaroo pancreatic ribonuclease.
 A:Reference number: A00833; MUID:78190621; PMID:658039
 A:Accession: A00833
 A:Molecule type: protein
 A:Residues: 1-122 <GMA>
 C:Superfamily: pancreatic ribonuclease
 C:Keywords: glycoprotein; hydrolase; nucleic acid digestion; pancreas
 F:11,40,117/Active site: His, Lys, His #status predicted
 F:25-83,39-94,57-109,64-71/Disulfide bonds: #status predicted
 F:61/Binding site: carbohydrate (Asn) (covalent) #status absent

Query Match 20.3%; Score 122; DB 1; Length 122;
 Best Local Similarity 30.7%; Pred. No. 3.7e-05;

Matches 35; Conservative 16; Mismatches 45; Indels 18; Gaps 6;

QY 6 FQOKHI-----INTPIICNTIMDNNIYVGGCKRVNTFISSATYKAICTGVINNV 51
 Db 7 FQROHMDTSTASSNYCNLMKAR-DMTSGRCPLNTFIEHPKSVDAVCHQENVTK 65
 QY 52 TGVINNVLTSTFQNTCTRTSTTPRP-CPYSSRTETNYICVCE-NOY-PVHF 103
 Db 66 NGRTNC-YKSNRSLSTTNCRTGASKYPMCOYETSMNRKQIIIVACEGQYVPHF 118

RESULT 12

NRCU
 pancreatic ribonuclease (EC 3.1.27.5) - nutria (tentative sequence)
 N:Alternate names: RNase 1; RNase A
 C:Species: Myocastor coypus (nutria, coypu)
 C:Date: 24-Apr-1984 #sequence_revision 30-Sep-1988 #text_change 31-Mar-2000
 C:Accession: A00822
 R:van den Berg, A.; van den Hende-Timmer, L.; Beintema, J.J.
 Biochim. Biophys. Acta 453, 400-409, 1976
 A:Title: Isolation, properties and primary structure of coypu and chinchilla pancreatic
 A:Reference number: A00612; MUID:77065676; PMID:99896
 A:Accession: A00822
 A:Molecule type: protein
 A:Residues: 1-128 <VAN>
 C:Superfamily: pancreatic ribonuclease
 C:Keywords: glycoprotein; hydrolase; nucleic acid digestion; pancreas
 F:12,41,119/Active site: His, Lys, His #status predicted
 F:26-84,40-95,58-110,65-72/Disulfide bonds: #status predicted
 F:34/Binding site: carbohydrate (Asn) (covalent) #status experimental

Query Match 20.0%; Score 120.5; DB 1; Length 128;
 Best Local Similarity 31.6%; Pred. No. 5.5e-05;
 Matches 37; Conservative 15; Mismatches 42; Indels 23; Gaps 7;

QY 6 FQOKHI-----INTPIICNTIMDNNIYVGGCKRVNTFISSATYKAICTGVINNV 59
 Db 8 FERQHMDSRSPSTPNVNCNEMKSR-NMVGRCRKPNTFVHEPLADVOAVC---FQKNV 63
 QY 60 L-----STTRFQNTCTRTSTTPRP-CPYSSRTETNYICVCE-NOY-PVHF 103
 Db 64 LCKNGQNTCYQSVSTMSITDCRETGSSKYPNCAKYTKQAKKHIIIVACEGPNYPVHF 120

RESULT 13

NRMS
 pancreatic ribonuclease (EC 3.1.27.5) precursor - mouse
 N:Alternate names: RNase 1; RNase A
 C:Species: Mus musculus (house mouse)
 C:Date: 30-Nov-1980 #sequence_revision 13-Mar-1997 #text_change 18-Jun-1999
 C:Accession: A34090; #sequence_revision 13-Mar-1997 #text_change 18-Jun-1999
 R:Schueller, C.; Nijssen, H.M.J.; Kok, R.; Beintema, J.J.
 Mol. Biol. Evol. 7, 29-44, 1990
 A:Title: Evolution of nucleic acids coding for ribonucleases: the mRNA sequence of mo
 A:Reference number: A34090; MUID:90136034; PMID:2299980
 A:Accession: A34090
 A>Status: preliminary
 A:Molecule type: mRNA
 A:Residues: 1-149 <SCH>
 A:Cross-references: GB:M27814; NID:9200762; PIDN:AAA0060.1; PID:9200763
 R:Samuelson, L.C.; Wiehner, K.; Howard, G.; Schmidt, R.M.; Koepflin, D.; Meister, M.H.
 Nucleic Acids Res. 19, 6935-6941, 1991
 A:Title: Isolation of the murine ribonuclease gene R1b-1: structure and tissue specif

A:Reference number: S22598; MUID:92107684; PMID:1840677
 A:Accession: S22598
 A>Status: preliminary
 A:Molecule type: DNA
 A:Residues: 1-149 <SAM>
 A:Cross-references: EMBL:X60103; NID:953981; PIDN:CAA42697.1; PID:953982
 R:Lenstra, J.A.; Beintema, J.J.
 Eur. J. Biochem. 98, 399-408, 1979
 A:Title: The amino acid sequence of mouse pancreatic ribonuclease.
 A:Reference number: A00830; MUID:80024269; PMID:556267
 A:Accession: A00830
 A:Molecule type: protein
 A:Residues: 26-149 <LEN>
 C:Superfamily: pancreatic ribonuclease
 C:Keywords: glycoprotein; hydrolase; nucleic acid digestion; pancreas
 F:1-25/Domain: signal sequence #status predicted <Sig>
 F:26-149/Product: pancreatic ribonuclease #status experimental <MAT>
 F:37,66,144/Active site: His, Lys, His #status predicted
 F:51-109,65-120,83-135,90-97/Disulfide bonds: #status predicted
 F:62,87/Binding site: carbohydrate (Asn) (covalent) #status predicted

Query Match 20.0%; Score 120.5; DB 1; Length 149;
 Best Local Similarity 30.8%; Pred. No. 6.4e-05;
 Matches 36; Conservative 16; Mismatches 42; Indels 23; Gaps 7;

QY 6 FQOKHI-----INTPIICNTIMDNNIYVGGCKRVNTFISSATYKAICTGVINNV 59
 Db 33 FQROHMDPDGSSINSPTFCNQMKRR-DMTNSCKPNTFVHEPLADVOAVCS---QENV 88
 QY 60 L-----STTRFQNTCTRTSTTPRP-CPYSSRTETNYICVCE-NOY-PVHF 103
 Db 89 TCKNRKSNKYSSSLHTTDCHLKGNKRYPCNDYKTYOKHIIIVACEGPNYPVHF 145

RESULT 14

AA3825
 angiotensin - pig
 C:Species: Sus scrofa domestica (domestic pig)
 C:Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 10-Sep-1999
 C:Accession: S29834; A43825
 R:Bond, M.D.; Strydom, P.J.; Vallee, B.L.
 Biochim. Biophys. Acta 1162, 177-186, 1993
 A:Title: Characterization and sequencing of rabbit, pig and mouse angiotensins: discer
 A:Reference number: S29833; MUID:93192291; PMID:8448182
 A:Accession: S29834
 A>Status: preliminary
 A:Molecule type: protein
 A:Residues: 1-123 <RON>
 A>Note: this sequence was submitted to the Protein Sequence Database, December 1992
 C:Superfamily: pancreatic ribonuclease

Query Match 19.9%; Score 119.5; DB 1; Length 123;
 Best Local Similarity 39.5%; Pred. No. 6.6e-05;
 Matches 30; Conservative 6; Mismatches 35; Indels 5; Gaps 2;

Oy 33 CKRNPFIISATVACICG--T-VINMVLTSTRLOLTCRTITRTP-PCPPSRIE 87
 ||| ||||| : ||||| : ||||| : ||||| : ||||| :
 Db 39 CKENVFIHSTRNDIKALCNDKNGEPIYNNRRBSKSPQITTCNKKGSSNRPFGYATAG 98
 ||| ||||| : ||||| : ||||| : ||||| : ||||| :
 Oy 88 TNYLTVACENQPYHF 103
 ||| ||||| |||||
 Db 99 FRTIYVACENGLPVHF 114
 ||| ||||| |||||

RESULT 15

NRGPB

pancreatic ribonuclease (EC 3.1.27.5) / B - guinea pig (tentative sequence)
N-Alternate names: RNase B

N;Alternate names: RNasep, IE

C:\species: cavia porcellus (guinea pig)

C:\Accession: A00826	#sequence_revision	24-Apr-1984	#text_change	31-Mar-2000
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C;Accession: A00826

K; van den Berg, A.; van den Hende-limmer, L.; Holsteenge, J.; Gastra, W.; Beintema, J. Eur. J. Biochem. 75, 91-100, 1977

Eur. J. Biochem. 75:

ATitle: Guinea pig pancreatic ribonucleases. Isolation, properties, primary structure and
AReference number: A91247; MUID:77185023; PMID:862624

A;Accession: A00826

A;Accession: A00826

A: Molecule type: protein

A;Residues: 1-128 <VAN>

A; Note: 64-Pro was also found

C; Superfamily: pancreatic ribonuclease

C: keywords: glycoprotein; hydrolase; nucleic acid digestion; pancreas

Binding site	status	predicted
F:12,41,119/Active site: His, Lys, His	#status	predicted
F:21,34/Binding site: carbonylate (Asn)	#status	predicted

F:21,34/Binding site:	carbonylhydrate (Asn)	(covalent)	#status experimental
F:26-84	40-95	58-110	65-72/Dissulfide bonds: #status predicted

F; 26-84, 40-95, 58-110, 65-112/Disulfide bonds: #status predicted

Query Match

Query Match	Similarity	Score	DB	Length
19.7%	31.6%	118.5	1	128
Best Local	Pred	NO	8	60-05

Match	Conservative	Mismatch	Indel
37	31.68	8.6e-05	23

Matches 3/; Conservative 14; Mismatches 43; Indels 23; Gaps 6;

0Y 600KHI-----ITPPLICTMIDNNIYIIGGCGKRPFETIISATTVKRICGVENMNV 59
 Db 8 F0R0HMDPEGSPPSSNMYCNVMIIR-NMFG0GCKPNTFVHESLADYQVAC--FQKNV 6
 0Y 60 L-----SITRPOLNCTGRSITRR-CYSSSTETENIYCVAGCENO--YPAHF 103
 Db 64 LCKMGJTNCTOSTSRMRITDCRYVTSKPFNCSTRMG0AKSLTIVACEGDPVYHF 120

Search completed: June 25, 2003, 14:58:06
Job time : 12.6202 secs.

